

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43bis.1)

Date of mailing **17 DEC 2004**
(day/month/year) see form PCT/ISA/210 (second sheet)



Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/IL2004/000740

International filing date (day/month/year)
11.08.2004

Priority date (day/month/year)
02.10.2003

International Patent Classification (IPC) or both national classification and IPC
H04N5/33, H04N3/15, H04N5/235

Applicant
OPGAL LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
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International application No.
PCT/IL2004/000740

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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International application No.
PCT/IL2004/000740

Box No. II Priority

1. ☒ The following document has not been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).
- ☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. ☐ It has not been possible to consider the validity of the priority claim because a copy of the priority document was not available to the ISA at the time that the search was conducted (Rule 17.1). This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
4. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------------------------------|
| Novelty (N) | Yes: Claims | 1-62 |
| | No: Claims | |
| Inventive step (IS) | Yes: Claims | 14-23,32,40,41,55 |
| | No: Claims | 1-13,24-31,33-39,42-57,60-62 |
| Industrial applicability (IA) | Yes: Claims | 1-62 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

**WRITTEN OPINION OF THE
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International application No.
PCT/IL2004/000740

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

1. Reference is made to the following documents:

D1: WO-A-03/067874

D2: EP-A-0776124

D3: WO-A-01/38825

2. **Independent claims**

Documents D1 and D2 disclose that pixel grouping affects sensitivity of a sensor array. In particular, both D1 and D2 mention pixel grouping directly in combination with sensitivity (see the passages cited in the International Search Report). To adjust pixel grouping to obtain a given sensitivity, and therefore to provide a "sensitivity adjuster" as claimed, is therefore considered to lie within the capabilities of the skilled person aware of the disclosure of these documents. Further, the sensor mentioned by D1 is an IR sensor; D2 deals with x-ray imagers, but the application of its disclosure to IR sensors is clear from the more general wording of claim 1 and from the opening paragraphs, where also IR is mentioned (page 1, lines 25-34).

For these reasons **claims 1 and 49** are not considered to satisfy the criterion set forth in Article 33(3) PCT (lack of inventive step).

3. **Dependent claims**

- 3.1 Although relating to an IR camera and not to an IR sensor, **claim 35** is considered to be a dependent claim because it includes the subject-matter of claim 1 (Rule 6.4 PCT).

Since the IR sensor is to be coupled to a video processor to form a video image, the feature added to claim 1 in claim 35 is considered to be obvious.

Therefore claim 35 lacks an inventive step (Article 33(3) PCT).

- 3.2 As to **claims 8, 38 and 55**, the capability of selecting a window in a matrix sensor is known, and its use in the sensor claimed in claim 1 does not appear to cause unexpected effects or advantages - at least none easily derivable from the claimed subject-matter. Further, the use of multiresolution windows is known from D3 (see the cited passages). Thus it is not apparent that this feature, added to the subject-

matter of claim 1, overcomes the objection raised above to the corresponding independent claims.

- 3.3 The feature set out in **claim 14** although not entirely clear appears to relate to the control of pixel grouping to adjust sensitivity in an exposure controlling feedback loop. If so, this feature is not disclosed by any available document and is not considered to be obvious to the skilled person, since normally such AGC-like feedback loops act on gain, exposure time or optical devices (stop values). Thus, although the provision of a user control of sensitivity by means of charge binning is considered not to involve an inventive step, the use of such a control within a feedback loop managed by a processor as claimed in claim 14 is considered to meet the criterion set forth in Article 33(3) PCT.
- 3.4 **Claim 15** corresponds to claim 14 and does not appear to introduce any new additional feature. It is suggested to delete it because superfluous. Claim 14 could be made dependent on claims 1 and 7 if the applicants so wish.
- 3.5 The additional features set out in the **remaining claims** dependent on claim 1 and not dependent on claim 14 appear to be minor implementation details either known from the cited documents D1 and D2 or which may be considered to lie within the capabilities of the skilled person.
Therefore said claims do not appear to add anything inventive to the subject-matter of claim 1.
- 3.6 Analogous comments apply, *mutatis mutandis*, to the corresponding claims dependent on other independent claims.
4. The claims are not drafted in the proper two-part form (Rule 6.3(b) PCT) thereby respecting the cited prior art in the precharacterizing portion.
5. Reference signs in parentheses should be inserted in the claims to increase their intelligibility, Rule 6.2(b) PCT.
6. To meet the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 should be mentioned in the description, and these documents identified therein.